STATE OF KANSAS

THE ADJUTANT GENERAL

DIVISION OF EMERGENCY MANAGEMENT
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TOPEKA, KANSAS 66611-1287

September 18, 1996

Office of the Secretary
Federal Communication Commission
Washington, DC 20554

To Whom it May Concern:

Enclosed you will find the State of Kansas' comments to the Notice of Proposed Rule Making (NPRM) regarding the FCC 96-155, WT Docket No. 96-86. The State of Kansas formed a committee to review this NPRM. The committee membership included representatives from Emergency Management, Law Enforcement, Fire Service, Emergency Medical Services, Kansas Department of Transportation and Kansas Highway Patrol

Wireless communication is essential to Kansas' public safety agencies. The support of the FCC is appreciated and on behalf of the committee, thank you for the opportunity to submit these comments.

Sincerely,

Dale W. Kirmer

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Radiological Program/Information System
Coordinator

Kansas Division of Emergency Management
Committee on Wireless Communication
for
Public Safety Agencies

September 18, 1996

Comment Regarding FCC 96-155, WT Docket No. 96-86

Thank you for the opportunity to respond and comment in the matter of Federal Communication Commission WT Docket No. 96-86. The comments will be structured in the framework suggested in ¶20, Page 8 of the docket.

1. The first issue to comment on concerns interoperability, which includes proposed definitions for "public safety" and "interoperability." Several definitions are being proposed for various aspects of public safety in ¶24, page 10. The committee believes those definitions are sufficient to take into account the many and varied agencies which are responsible for saving lives and protecting property. The committee believe PSWAC has attempted to be inclusive in its approach to the subject. Although Emergency Management, per se, is not mentioned, the proposed definitions would seem to have enough latitude to take it into account.

2. The second issue defined by the Federal Communications Commission deals with the subject of "interoperability." This structure is subdivided into a basic definition and then, further, whether it is infrastructure dependent or not. Further, the proposed definitions take into account day-to-day operations versus large-scale, disaster events.

In terms of interoperability, I would offer the following observations:

♦ It would be of great assistance to public safety operations if trunking technology were allowed to be applied to the UHF frequency spectrum in the 450 to 470 MHZ area. This would allow the same spectral efficiency claimed by current 800 MHz systems. This should be reasonably easy to accomplish, as these frequency bands already are paired for use in the fields.

♦ There is a great need for interoperability between agencies, levels of government and disciplines. In the past, this was accomplished within regional areas by attempting to get frequencies within the same band in the same area. Then, scanning and radios with sufficient spread to operate through an entire branch of frequency spectrum came about. It was still possible to perform interoperability on a daily basis. With the advent of trunking technology and its application to the 800 MHz spectrum, that capability was lost.

♦ It is very important that this interoperability be extended to dealing with various levels of government. Right now, it is difficult -- if not impossible -- for someone with the Federal Bureau of Investigation to speak with the County Sheriff. This issue must be dealt with.

3. Interoperability Needs. The committee believes the FCC is doing the public safety sector a service by recognizing the specialized nature of emergency preparedness events or tasks for operation. When disasters occur in an area, communication is the paramount priority item necessary for a successful response and recovery.

The FCC also recognized that many agencies are attempting to circumvent the problems of mixed spectrum and incompatible field units by the use of the cellular telephone. However, several documented problems exist with this method. To begin with, when the media arrives on the scene of an emergency, they establish a line on the cellular system and then simply do not hang up. This tends to lock up the entire system, and public safety users are prevented from accessing the system. To remedy this the committee forwards the following suggestion:

♦ The committee would suggest the FCC require cellular service carriers to be able to distinguish the electronic serial numbers (ESNs) associated with certain public safety cellular phones designated as "critical", and grant them priority access to the system as it becomes more "loaded." I would further suggest that at its ultimate, the system should reserve at least one channel for emergency services usage.

♦ The committee felt that county public safety agencies need to able to talk to each other. However, on an incident large enough to be multi-jurisdictional it is felt that the Incident Command or (Management) System would solve the interoperability issue. The Incident Commander will work through the agency representative for coordination and request of resources. The agency representative will use his radio to contact his folks.

♦ It is felt that Project 25, which is discussed in ¶98, is needed to ensure interoperability between the various radio manufacturing products. The trunked systems need an open protocol so that any vendor's radio will work with any vendor's trunk system. It seems that it will require the FCC's intervention if there is going to be an open protocol established for trunking. The private companies are not going to do it on their own, that is evident by the bickering and arguing that is going on between vendors.

♦ The county commissioners would be much more receptive to the 300 to 400 MHZ range spectrum, than the 800 MHz range because of all the installed equipment that are involved, (i.e. towers and trunking).

Problems with 800 MHz:

♦ The 800 MHz systems gives a false confidence that your communication with the tower was successful. The situation is that when an individual keys the mic, a signal is sent to the tower and confirms the tower contact but the voice does not get transmitted. This is a critical error. It has the potential to be life endangering, when an officer thinks he has called for backup and in fact the message did not get out.

♦ The number of trunked repeaters that any one site can have is limited by the FCC. The problem with the small number of trunked frequencies is illustrated with an example of a 10-48 call. The following public safety agencies typically arrive on the scene: fire rescue vehicle, captain vehicle, fire truck, two police cars. There are 5 vehicles on the scene and 3 channels available to talk. The 800 MHz, 4 channel system is shut down. The responders may be able to talk radio to radio if they do not go through a repeater.

♦ The 800 MHz system gives substantial problems inside buildings and in basements or sub-basements. The technicians say to install more repeaters, increase the coverage. The 800 MHz system seems to cost more and more to implement. This is a tremendous burden on small counties with limited tax base.

4. Spectrum Needs. The public safety agencies need effective and efficient radio communication for the most economical cost. This may involve applying new technology to spectrums currently licensed to public safety agencies, such as trunking technology to the UHF band.

♦ Project 25 favorably spoke about, where the establishment of an open protocol will allow radio brand A to talk to radio brand B and to radio brand C.

♦ It can be foreseen, in the near future, that the emergency medical technicians will carry in a camera and send the data back to the hospital. The hospital will be sending data to the field.

♦ Designing a system where interoperability is going to be cured will be highly unlikely because of all the different agencies that are coming in (with different radio frequencies and systems) into a jurisdiction. Saline County reports that they can pretty much talk to all the different response agencies in their jurisdiction. They feel if the Kansas Highway Patrol, Kansas Department of Transportation, or any one else coming into a scene, it is up to them to provide a communication link to the incident commander; not for the county to set aside a channel that everyone is going to try to get on. Everyone knows how it is in an emergency situation. Everyone is talking at the same time. If you add more agencies who can talk on that same channel, your radio will become useless.

5. There are techniques currently available to meet the changing needs of communication in the public safety agencies. The issue of spectrum disparity between agencies can be resolved many ways using cross band patching at the dispatch center, migrating an area to the same spectrum band and the simplest is to utilize the Incident Command (Management) System.

♦ Many counties are satisfied staying in the 150 to 450 MHZ range. The different agencies need radios to exhibit different characteristics, such as police, and fire need good portable to portable communication inside structures. They also need good mobile to base communications that require a minimal number of repeaters.

♦ It appears that the FCC is seeing the solution to the communication interoperability problem as a broad spectrum, nation wide approach to communication. Which will probably not be well solved on that broad a basis. This approach might work if the communication on a day-to-day would be Federal to State, State to County and County to Local. The reality is that the daily communications take place local jurisdiction to local jurisdiction.

♦ The committee has concern with the use of "required" in ¶54-55. "We request comment on whether public safety licensees, as a general matter, should be required to utilize joint networks for their public safety communications. The word required is a problem. While this is a good idea, there are some real local jurisdiction problems that may negate doing common dispatching.

♦ With new technologies such as Alpha numeric pagers that can page an individual any where in the world, which can be activated through the Internet with an individuals E-mail address. The committee has a hard time doing to much great discussion about the 800 MHz system for any thing other than voice communication. The cell phone towers are kicking out stronger wattage which enables the use of lower wattage cell phone units. The reason, we are able to use 18" satellite dishes is that the power of the satellites are increasing. It will not be but a few years until a 6" vertical antenna will be able to receive/transmit a satellite signal. We are already doing it with GIS. It won't be very long until that data stream will be available on a dish antenna, if not a vertical antenna, on top of the EMS unit as the power of satellites increase their ability to receive even weak signals, (i.e. read GIS signals for location of downed pilots) will improve. With this technology right around the corner, the case for utilizing the 800 MHz system for data transmission is by-passed.

6. Competition in the market is the best engine to bring about the best product.

♦ Competition is building a better product and better serving the needs of the folks you want to sell that product to. Radios that can fit every bodies needs is best, rather than you buy one vendor's radio and you have that vendor's radio for life. That is not competition. The statement that was made in ¶100 about Project 25 limiting competition is backwards to reality. A competitive market will only be create if proprietary software is eliminated, by regulation (i.e. creating an open protocol for trunked systems). This is the only way we will have competition in the market.